

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 36

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** AGE BACKLUND,  
BENGT NILSSON,  
and  
LARS STIGSSON

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Appeal No. 1998-1832  
Application No. 08/434,331

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**ON BRIEF**

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Before KIMLIN, OWENS, and LIEBERMAN, Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner refusing to allow claims 1 and 3 through 19, as amended subsequent to the Final Rejection, which are all the claims pending in this application.<sup>1</sup>

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<sup>1</sup>Two amendments after final under Rule 116 were filed by the appellants. The first received April 10, 1997, was not entered for purposes of appeal. See Advisory action dated May 7, 1997, Paper No. 25. The second amendment received May 12, 1997, Paper No. 27 was entered by the examiner.

## **THE INVENTION**

The invention is directed to a process for the production of bleached pulp. The process requires the presence of two recovery installations. A filtrate containing used cooking chemicals is contained in the first recovery installation. A filtrate containing used chlorine-free bleaching chemicals is contained in the second recovery installation. Additional features of the invention are set forth below in an illustrative claim.

## **THE CLAIM**

Claim 1 is illustrative of appellants' invention and is reproduced below:

1. A process for producing bleached pulp comprising the steps of:
  - cooking a cellulosic material under alkaline conditions with a cooking chemical to produce unbleached pulp;
  - recovering a filtrate containing a used cooking chemical in a first recovery installation;
  - washing said unbleached pulp with acid;
  - delignifying said unbleached pulp in the presence of oxygen, whereby a filtrate is produced containing released organic material;
  - bleaching said unbleached delignified pulp with a chlorine-free bleaching chemical;
  - recovering a filtrate containing a used chlorine-free bleaching chemical and said filtrate containing released organic material in a second recovery installation;

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regenerating at least a portion of said used bleaching chemical; and

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chlorine- supplying said regenerated bleaching chemical to at least one of said  
free bleaching step or said oxygen delignification step.

### THE REFERENCES OF RECORD

As evidence of obviousness, the examiner relies upon the following references:

Smith et al. (Smith)	3,725,194	Apr. 3, 1973
Reeve et al. (Reeve)	4,039,372	Aug. 2, 1977
Phillips et al. (Phillips)	4,372,812	Feb. 8, 1983
Mannbro	4,595,455	Jun. 17, 1986
Santén et al. (Santén)	4,601,786	Jul. 22, 1986
Henricson	5,340,440	Aug. 23, 1994

Ahlstrom Brochure (Ahlstrom), "New generation kraft pulping and bleaching technology," no page numbering (1992).

### THE REJECTIONS

Claims 1, 3 through 14 and 16 through 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Henricson in view of Phillips, and Smith with or without Mannbro, Reeve, or Ahlstrom.

Claim 15 stands rejected under 35 U.S.C. § 103 as being unpatentable over Henricson in view of Phillips, and Smith with or without Mannbro, Reeve or Ahlstrom and further in view of Santén.

Claims 1, and 3 through 19 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which appellants regard as the invention.

### **OPINION**

We have carefully considered all of the arguments advanced by the appellants and the examiner, and agree with the appellants that the aforementioned rejections are not well founded. Accordingly, we reverse the rejections.

#### **The Rejection Under 35 U.S.C. § 112**

“The legal standard for definiteness [under the second paragraph of 35 U.S.C. § 112] is whether a claim reasonably apprises those of [ordinary] skill in the art of its scope. [Citations omitted.]” *In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). The inquiry is to determine whether the claim sets out and circumscribes a particular area with a reasonable degree of precision and particularity. The definiteness of the language employed in a claim must be analyzed not in a vacuum, but in light of the teachings of the particular application. *In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

It is the examiner’s position that the claimed subject matter directed to the phrase, “a second recovery installation,” is vague and indefinite. The examiner states that, “[i]t is not clear what components of a recovery installation are covered by this term.” See Answer, page 6. We determine, however, that the description in the specification at

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page 3, lines 13 -15, in conjunction with original claim 4 and the attendant description  
in

the specification of the portion of Figure 1, from page 6, line 12 through page 8, line 17 fully describes the "second recovery installation."

Based on these findings, we conclude that the specification provides a reasonable standard for understanding the metes and bounds of the phrase, supra when the claim is read in light of the specification. Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984). Accordingly, we reverse the rejection of the examiner.

### **The Rejections under 35 U.S.C. § 103**

"[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a prima facie case of unpatentability," whether on the grounds of anticipation or obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). On the record before us, the examiner relies upon a combination of up to seven references to reject the claimed subject matter and establish a prima facie case of obviousness. The basic premise of the rejection is that it would have been obvious to one of ordinary skill in the art, to use different recovery installations, e.g., dissolving tanks and different recovery sections of the recovery boiler, for each of the different effluents recovered by Henricson. See Answer, page 4. We disagree. Our initial inquiry is directed to the scope of the claimed subject matter.

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During patent prosecution, claims are to be given their broadest reasonable interpretation consistent with the specification, and the claim language is to be read in view of the specification as it would be interpreted by one of ordinary skill in the art. *In re Morris*, 127 F.3d 1048, 1053-54, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); *In re Sneed*, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983); *In re Okuzawa*, 537 F.2d 545, 548, 190 USPQ 464, 466 (CCPA 1976).

Our construction of the subject matter defined by appellants' claim 1 is that the claimed subject matter is directed to two separate and distinct recovery systems. The first recovery system process is directed to evaporating the filtrate containing the used cooking chemicals to produce a concentrated filtrate and incinerating it. See Figures **1**, **1D** and **17-20**. The second recovery system process is directed to evaporating the filtrate containing used bleach chemicals to produce a condensed filtrate which is thereafter incinerated. See Figures **1**, **6D** and **11-16**. According to the process disclosed in Figure **1**, only residual cooking chemicals remain in the pulp as it moves from the washing steps **2** and **3** to the oxygen delignification step **7** and the bleaching step **9**.

In contrast, we find that Henricson discloses the recovery of two different fluid



waste streams from the production of cellulose pulp. See column 1, lines 54-62.

However, both fluid waste streams result from the production of cellulose pulp. *Id.* The streams differ from each other only in that the second stream has a greater sulfur content. *Id.* The constituents added to the second stream may include waste acid from a chlorine dioxide plant. See column 2, lines 19-20. The claimed subject matter, however, is directed to a totally chlorine free process, and the addition of waste from a chlorine dioxide plant is not within the scope of the claimed subject matter.

The apparatus of Henricson further contains means for combusting the first and second waste streams separately to produce first and second melts. See column 3, lines 32-33. The means preferably comprises a soda recovery boiler having at least two different melt sections and a common waste gas discharge. See column 3, lines 39-41. The soda recovery boiler contains a combustion chamber with partition means for dividing the combustion chamber into a first and second melt producing volume. See column 3, lines 54-56. The pulp discharged from the digester may be bleached. See column 4, lines 33-43. Thereafter the pulp is washed to remove the chemicals from the pulp, for example by countercurrent washing. *Id.* The washing agent from the last washing stage to which the chemicals have been concentrated is thereafter directed to the same recovery process of the chemicals. See column 4, lines 45-48. Accordingly, we

determine that there is no suggestion that the filtrate remaining from the bleaching of the pulp be recovered in a separate and distinct recovery system. At most Henricson suggests that the waste from the bleaching step be combined with a second split stream having a second sulfur content greater than the first sulfur content from the production of cellulose pulp. See column 1, lines 56-59, and column 2, lines 17-21. Based upon the above findings, we conclude that Henricson necessarily requires a mixture of used bleach chemicals and used cooking chemicals. Accordingly, no separate and distinct recovery installation is contemplated or suggested by Henricson.

Furthermore, we do not agree with the examiner's position that even if Henricson does not teach treating the effluent in a second recovery installation, then such would have been obvious as taught by Mannbro, Reeve, or Ahlstrom. See Answer, page 4.

We find that Mannbro contains only a single regeneration system which processes both the oxy-liquor and the black liquor. See column 3, lines 56-59 wherein it states that the black liquor is regenerated in **13** and **14**. We find that the residue of the oxy-liquor, i.e., the spent liquor from the oxygen delignification stage 9, column 3, lines 63-65 is led directly to the hydroxide regeneration plants **13** and **14**. See column 5, lines 60-62. As stated by Mannbro, "[b]rown liquor may replace some [of the] white liquor and is produced in the causticizing plant **14**. The brown liquor is obtained by dissolving

regenerated soda from the black liquor combustion **13** in oxy-liquor.” See column 6, lines 7-11. Accordingly, we conclude that there is no suggestion or teaching in Mannbro of using two separate recovery systems.

We find that Reeve is directed to feeding all the liquid effluent of the bleach plant directly or indirectly to the pulp mill spent pulping liquor recovery and regeneration operation. See column 2, lines 8-10. We find that Figure 1 discloses that the bulk of the caustic extraction filtrate in line **102** is used to dilute the concentrated white liquor in line **56** to provide the recycled pulping liquor in line **14**. See column 6, lines 39-42. Ultimately however, after digestion, it becomes black liquor **14**. Further reference to Figure 1 discloses that Reeve contains only a single recovery system with an evaporator **26** and a recovery furnace **30**. The black liquor in line **22** is subjected to evaporation in an evaporator **26** before passage to a recovery furnace **30**. See column 2, lines 48-53. Accordingly, we conclude that there is no suggestion or teaching in Reeve of using two separate recovery systems. We add only that Reeve is directed to a chlorine dioxide bleach plant, column 4, line 27. Accordingly, it is not seen why the person of ordinary skill in the art concerned with a total chlorine-free bleaching operation would look to a process directed to chlorine bleaching.

Finally, Ahlstrom is directed to chlorine-free bleaching and discloses a filtrate

recycling system for a bleaching sequence. See Figure 3. However, there is no disclosure of the system as a whole containing pulp digestion and a bleaching plant in a single schematic sequence. Moreover, it is Ahlstrom's preference that both the hot alkali extraction stage and the oxygen pre-bleaching step be integrated into the brown stock washing system, lowering the effluent leading to the recipient. See page 2. In addition, Ahlstrom states that the bleach plant waste water can probably be taken to the cooking liquor preparation system. See page 4. Accordingly, we find no teaching or suggestion that a separate and independent recovery installation be established for the bleach plant effluent.

Based upon the above considerations, even if the examiner was correct in combining Henricson, Phillips, and Smith with or without Mannbro, Reeve or Ahlstrom in the manner described supra, the recovery system and the process created would, in any event, fall short of the invention defined by the claimed subject matter, as the aforesaid claimed subject matter requires features that cannot be achieved by combining the four references. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988). Accordingly, the examiner has not established a prima facie case of obviousness.

## DECISION

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The rejection of claims 1, 3 through 14 and 16 through 19 under 35 U.S.C. § 103 as being unpatentable over Henricson in view of Phillips, and Smith with or without Mannbro, Reeve or Ahlstrom is reversed.

The rejection of claim 15 under 35 U.S.C. § 103 as being unpatentable over Henricson in view of Phillips, and Smith with or without Mannbro, Reeve or Ahlstrom and further in view of Santén is reversed.

The rejection of claims 1, and 3 through 19 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as the invention is reversed.

The rejection of the examiner is reversed.

**REVERSED**

EDWARD C. KIMLIN  
Administrative Patent Judge

TERRY J. OWENS  
Administrative Patent Judge

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